Performing demanding surgical procedures on delicate structures through deep channels, long hours of concentration requiring precise hand-eye coordination, and, of course, the ever increasing need to maximize OR efficiency – are all challenges facing the modern day surgeon.

It is precisely these critical demands of today's surgical environment which inspired the development of the new ZEISS OPMI® PENTERO® 800.

Whether for its proven apochromatic optics, unparalleled ergonomics and workflow-conducive features, ZEISS OPMI PENTERO 800 delivers crisp visual clarity while optimizing procedural efficiency.

In the pursuit of surpassing the daily challenges of surgery –

ZEISS OPMI PENTERO 800
Never compromise.

Cover image: upper part of cerebellum and lower part of parietal lob (posterior view)

Visualize the details

When navigating the anatomy through deep channels and complex structures, optimum illumination and magnification are absolutely essential. Equipped with advanced apochromatic optics, two-channel xenon illumination and a fully integrated video chain, ZEISS OPMI PENTERO 800 brings all your details of interest sharply into view – both in the eyepiece and the on-screen display.

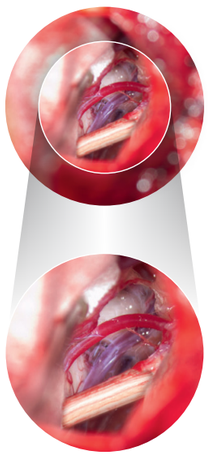
ZEISS OPMI PENTERO 800
Never compromise.

Two-way illumination
Shadows in deep channels and cavities are minimized with the two-channel xenon illumination of the surgical microscope.

Unparalleled depth of field
The integrated electronically controlled double-iris diaphragm enables surgeons to choose between maximum light and resolution or depth of field.

Fully integrated video chain
Camera, recorder, editor and monitor are fully integrated into the surgical microscope, delivering consistently sharp images without external equipment.

High-quality data injection
Display additional information directly through the eyepieces with the integrated navigation interface and MultiVision™ heads-up display.



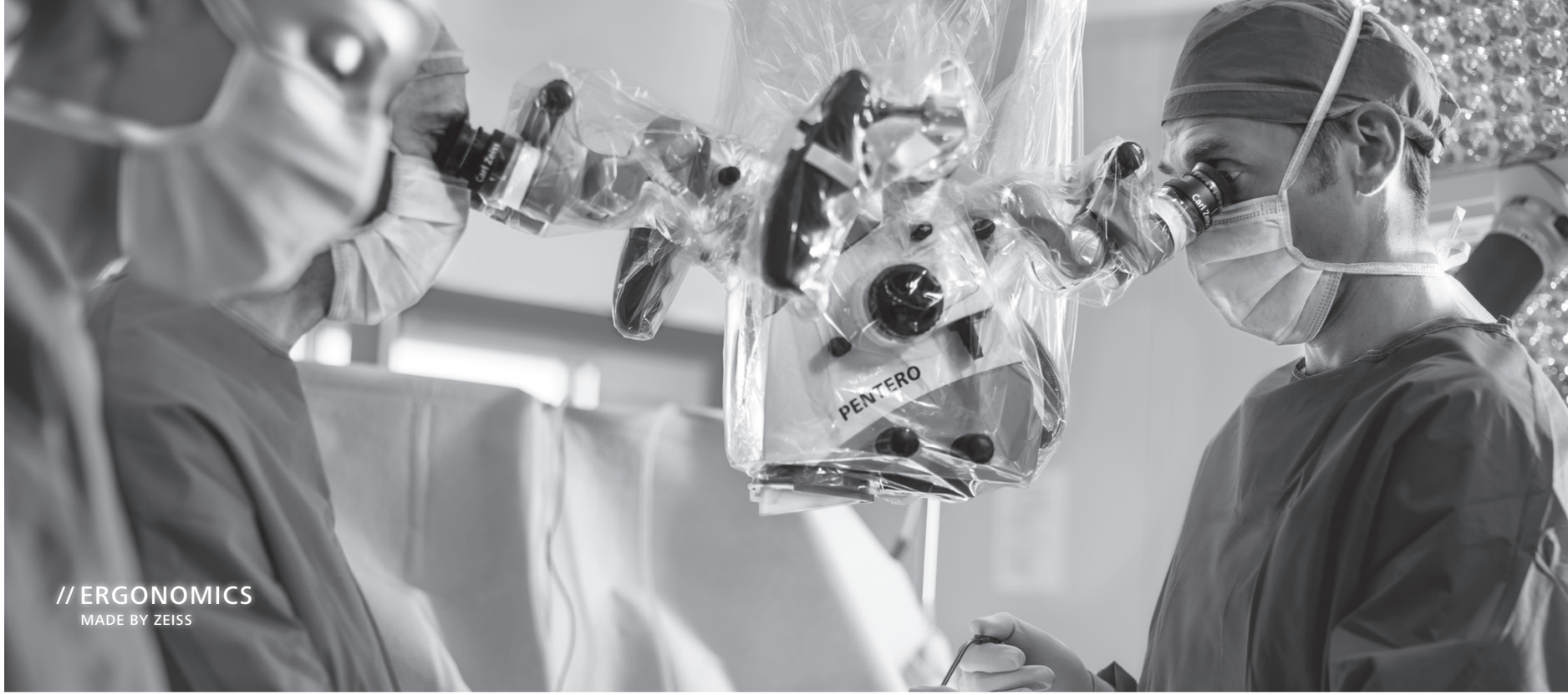
Magnification boost
Quickly increase magnification by an additional 50 % with the PROMAG™ function on the Foldable Tube f170/f260.

Image: navigation through optical nerve

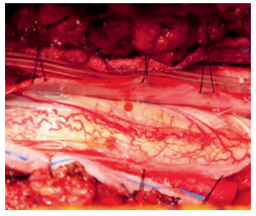
Perform at ease

Understanding the rigorous and demanding routine of the modern surgeon, ZEISS OPMI PENTERO 800 features intelligent ergonomic properties designed to enhance handling while streamlining overall surgical workflow. Functions like the free-floating suspension and a dynamic foldable tube facilitate increased magnification and positioning flexibility as well as user comfort. These unique design elements help to significantly minimize physical strain for the operating surgeon and surgical assistant.

ZEISS OPMI PENTERO 800
Never compromise.



Free-floating movement
Effortlessly move the device into any desired position, on demand.

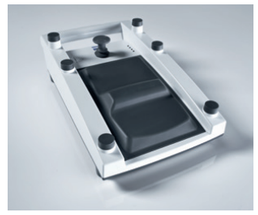


Fast focus
The AutoFokus™ functionality enables instant adjustment of the focal plane for a sharp image – every time.

Image: spinal cord AVM (arterio-venous malformation)

Dynamic foldable tube
Highly flexible and height adjustable, the Foldable Tube f170/f260 provides both surgeons and assistants enhanced ergonomics and viewing comfort.

Accurate movements
Precisely reposition the device in high magnification with the X/Y function using the handgrips or the foot control panel.



Wireless foot control
Conveniently control up to 14 different surgical microscope functions with the wireless foot control panel.

Intuitive operation
Whether by touch screen, handgrips or mouth switch, the intuitive operation is designed for maximum ease of use.

Maximize OR efficiency

Time is of the essence in the OR.
A faster room turnaround enables a higher patient throughput and procedural efficiency. Enter AutoBalance, AutoDrape® and FlexiTrak™ – functions that enable OR personnel to realize this efficiency potential. The intuitive user interface provides direct access to all surgical microscope functions via the touchscreen, including patient data, preset configurations and video recording.

ZEISS OPMI PENTERO 800
Never compromise.

One-step AutoBalance
Automatically balance the surgical microscope to enable a fast setup and optimum mobility, even when draped.

Quick, easy draping
Simply activate AutoDrape to automatically evacuate the air from the sterile drape within seconds.

Clarity and sterility
The unique VisionGuard® optical lens from ZEISS provides an optimally clear view through the objective while enabling sterility.

Remote diagnosis
To optimize device uptime and minimize service costs, ZEISS offers web-based remote diagnostic service support.

Highly agile
The unique FlexiTrak function facilitates optimum maneuverability from one room to the next and device steering to any desired position.

Short prep time
Reduce preparation time with preset functions for individual users and quick patient data setup.

Carl Zeiss Meditec AG
Goeschwitzer Strasse 51–52
07745 Jena
Germany
www.meditec.zeiss.com/contacts

Publication No: EN_30_010_0800I SUR.5702 Printed in USA CZ:X/2013
The contents of the brochure may differ from the current status of approval of the product in your country. Please contact our regional representative for more information. Subject to change in design and scope of delivery and as a result of ongoing technical development.
OPMI, PENTERO, MultiVision, PROMAG, AutoFokus, AutoDrape, VisionGuard, FlexTrak, Varioskop, Superlux and Focus Light Link are either trademarks or registered trademarks of Carl Zeiss Meditec AG.
© Carl Zeiss Meditec AG, 2013. All copyrights reserved. Printed on elemental chlorine-free bleached paper.

OPMI PENTERO 800 from ZEISS

Never compromise

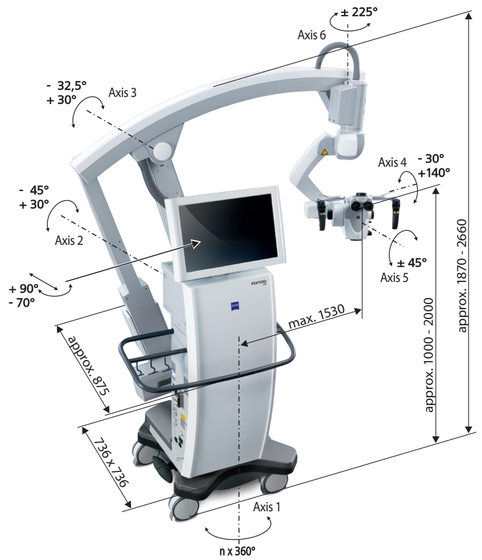
We make it visible.

The moment you expand the surgical
boundaries beyond what seems possible.
This is the moment we work for.
// MICROSURGERY
MADE BY ZEISS

OPMI PENTERO 800 from ZEISS

Technical data

Rated voltage	(115 V): 100 V – 125 V
	(230 V): 220 V – 240 V
Current consumption	Max. 1.200 VA
Rated frequency	50 Hz – 60 Hz
Electrical standard	Complying with IEC 60601-1:2005; UL 60601-1; CAN/CSA-C22.2 No. 601.1-M90
	Protection class I, degree of protection IP20
	Type B equipment
	Class 2 laser product as per EN 60 825-1:2002
Weight	Weight approx. 358 kg
	Weight of the surgical microscope incl. transport container: approx. 610 kg



Standard and optional features

Apochromatic optics	Motorized focus; Varioskop® with working distance 200 – 500 mm	●
	Motorized zoom; 1:6 zoom ratio	●
	10x magnetic widefield eyepieces with integrated eyecups	●
Illumination	Superlux® 330 light source with 2 x 300 W xenon	●
	Automatic Iris Control™ for adjusting the illumination to the field of view	●
	Individual light threshold setting	●
	Focus Light Link™: working distance controlled light intensity	●
	Display of remaining lamp life time	●
Operation	Multifunctional programmable handgrips	●
	Magnetic clutches for all axes	●
	Touchscreen user interface	●
	XY robotic movement in 3 axes (variable speed)	●
	Autofocus with 2 visible laser dots, automatic mode with magnetic brakes	○
Setup	AutoBalance	●
	AutoDrape – air evacuation functionality	○
	Mouth switch fine balance	●
Video	22" HD video touchscreen on extendable arm	●
	Integrated 3-CMOS SD video camera	●
	Integrated video still image capturing on HDD and USB-media	●
	Integrated 3-CMOS HD video camera	○
	Integrated SD or HD video recording and editing	○
	Adaptation of consumer (SLR) photo / video camera	○
Connectivity / Data management	Video-in for external SD video sources	●
	Navigation interface	○
	Interface for micromanipulator	●
	Remote diagnosis via internet / VPN	●
Accessories	12.5 x magnetic widefield eyepieces with integrated eyecups	○
	Straight tube, focal length f = 170 mm	○
	Stereo co-observation tube	○
	Foldable Tube f170 / f260, including the PROMAG™ function for additional 50 % magnification and integrated rotate function	○
	Wired foot control panel	○
	Wireless foot control panel	○
	Mouth switch	○

Images courtesy of:
BrainLAB AG, Feldkirchen, Germany (p. 5)
Barrow Neurological Institute, Phoenix, Arizona, USA (pgs. 1,5,6)

● *Standard* ○ *Option*